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# SCOTT'S SOY BEANS

The growing of soy beans has long since passed the experimental stage. Their adaptation to all parts of the country, and their value and place in agriculture, apparently surpassing all other legumes, has been determined. Their high feeding value and their usefulness as soil improvers make them valuable additions to our list of field crops and they merit a hearty welcome from every farmer. They furnish the richest feed and improve your land while producing it. We believe that we are the largest distributors of northern grown soys in the country. We can at all times furnish most varieties. However, as there is an extraordinary demand this season, please give first and second choice when ordering. Many varieties are much alike. We have several kinds not named here. The Early Brown is exactly the same as the Ito San, except that it seems to be hardier and is more plentiful. We advise ordering Early Brown. Owing to the great difference in price the Mammoth Yellow is an especially good bargain this year.

O. M. SCOTT & SONS CO., Marysville, Ohio

**1. What is this soy, or soja bean?** The soy bean is an erect, rather hairy, leguminous plant, somewhat resembling the ordinary field bean. It has been cultivated in China for more than 5000 years.

**2. What use is made of this crop?** In extent and variety of uses, the soy bean is one of the most important legumes in Asiatic countries. At the present time, in the United States, it is most largely grown for forage, although the soy bean and its products are now being used in a large number of other ways.

**3. Why should I grow the soy bean?** It is a legume, therefore a nitrogen gatherer. It produces a large yield of seed, an excellent quality of forage that is relished by all farm animals, is easily grown for harvest, is drought-resistant, and is practically free from insect enemies and plant diseases.

**4. How far north can they be grown?** In general, the climatic adaptations are about the same as those for varieties of corn. Varieties mature in from 100 to 145 days.

**5. What kind of soil does the soy bean require?** The soy bean will succeed on nearly all types of soil. The best results, however, are obtained on mellow, fertile sandy loams, or clay loams. On poor soils they make a satisfactory growth, provided inoculation is present.

**6. How about an acid soil? Do I need to lime?** The soy bean thrives on soils that are too acid for the successful culture of clovers. However, the application of lime has invariably been found to increase the yield, both of forage and of seed.

**7. Should soy beans be inoculated?** Like all legumes the soy bean can utilize the nitrogen of the air only through the action of bacteria which produce nodules on the roots. The soy bean will give good results without inoculation, but in such case the nitrogen is taken directly from the soil and the land is made poorer. Why impoverish the soil when by means of inoculation the plant can get nitrogen from the air — through the agency of legume bacteria?

**8. How inoculate?** Natural inoculation does not occur until the bacteria have been introduced into the soil. This can be done by using soil from a field where soy bean plants have previously produced nodules. The better and simpler way, however, is by the use of pure cultures. Ask for "SCOTT'S BACTERIA — QUESTIONS AND ANSWERS." Scott's bacteria are guaranteed to produce nodules. A dollar can is enough for a bushel of beans.

**9. How should the seed bed be prepared?** The same as for corn. Like corn the soy bean readily responds to extra cultivation. Plow early and deep. Harrow in the spring to prevent growth of weeds. Disking is sufficient if the crop is to follow wheat after harvest, provided the ground is fairly mellow.

**10. When is the best time for planting?** Soy beans may be planted over a period extending from early spring until midsummer, depending largely on the latitude and the use to be made of the crop. In general the best time may be said to be about that for corn.

**11. How deep should the seed be planted?** About one inch. If a crust forms before the plants are up, it is well to break this with a weeder or light harrow.

**12. What is the best method of seeding soy beans?** Under nearly all conditions soy beans should be grown in rows 28 to 40 inches apart, and given about three cultivations in order to keep down the weeds. When the crop is to be used for forage and the soil is quite free from weeds, the soy bean may be drilled solid or broadcasted. Use the oats feed of the drill. Allow only every fourth spout to run when planting in rows.

**13. How far apart in the row should the plants stand?** Plants from 2 to 4 inches apart in the row give the best results.

**14. How much moisture does this crop demand?** One of the best qualities of the soy is that it is drought-resistant. However, they are not sensitive to excess of moisture. Drainage is not required.

**15. What variety of soy beans do you recommend?** The choice of varieties depends largely on the purpose for which the crop is to be grown. For early hay and for hogging off, or for following oats or wheat or for planting at the last cultivation of corn to be used for fodder or for hogging off, Early Brown, Ito San, Elton, Manchu and Black Eyebrow. For a later (and larger) hay crop and for silage, Hollybrook, Ohio No. 9035, Mongol, Haberland, Wilson, Sable, A. K., Morse, Mikado, Virginia, and Medium Green. For seed, in the northern sections, Early Brown, Ito San, Manchu, and Black Eyebrow. The Mammoth Yellows are very plentiful, and cheaper than others. They can be used for hay, for silage, or for soil improvement, but not for seed production except in the south. In the lists above we try to indicate by the order in which they are mentioned the ones we are surest of having abundantly in stock. For instance, Hollybrooks, Ohio 9035's, Mongols, Early Browns, Ito Sans, etc., are more plentiful than Virginias, Medium Greens, Black Eyebrows, etc.

**16. Can soys be used in rotations?** Yes, they are the most satisfactory legume, especially in short rotations. They may be used as a whole season crop as in Corn, Soys, Wheat and Clover or Grass rotation; or they may be used as a part season crop following small grain as, for instance, wheat.

**17. How can I have a legume in the ground all the time?** Plant soy beans with your corn. Soys alone the next year for hay, pasture, or seed. Follow with wheat in which you sow clover.

**18. Does wheat or rye follow soy well in a rotation?** Yes, and the ground needs no more preparation than when wheat follows corn. The yield is greatly increased because of the additional nitrogen stored in the soil by the soys and the better physical condition in which they leave the ground.

**19. How much seed is required?** Twenty to 30 pounds to the acre if in rows. Sixty to 70 pounds broadcast or drilled solid.

**20. When should soy beans be sown for hay?** Any time after the soil warms up in the spring. From the first of May to the first of August.

**21. At what stage in the development of the plant should the hay be made?** Any time after the pods form up to the time just before the leaves begin to drop off. At this stage the largest yield and best quality of hay is obtained.

**22. What is the feeding value of this hay?** Cut at the proper time soy bean hay contains more digestible nutrients, more carbohydrates than any other hay. Fed to dairy cows the Tennessee Exp. Station found that it produced 12% more milk and 18% more butter fat than alfalfa hay.

**23. What yields of seed and hay can be expected under normal conditions?** The soy bean will yield from one to three tons of hay per acre and occasionally four tons. In the northern states, the yield of seed ranges from fifteen to thirty bushels per acre.

**24. What is the feed value of the soy bean straw?** The straw obtained from threshing the soy bean is a valuable feed for all kinds of stock, making a valuable addition to the roughage, especially in the feeding of dairy cows.

**25. What is the feeding value of soy bean seed?** It contains about 40% protein and 18% fat. Needless to say its feeding value is very high.

**26. Can soy beans be seeded with corn?** Yes, that is just what we want to tell you about.

**27. When and how are they seeded with corn?** The most approved way is to drill them in the rows with the corn at the time of planting. Many manufacturers make attachments for corn planters which will either drill or check-row the beans. If you do not have the attachments, after the corn is planted change the plates in the planter to suit the size of your soy bean seed and run over the field in the same rows, planting the soys about one inch deep. The corn and bean seed can be mixed but this is not as satisfactory. If your planter has a fertilizer attachment, it is practicable to mix the beans with the fertilizer or with dirt.

**28. How much seed does this seeding require?** About six to ten pounds per acre.

**29. Does this improve the soil at once?** Yes, the soy improves the soil so that the corn almost invariably grows larger.

**30. What use can be made of such a crop as soys in corn?** It can be hogged off or put in the silo. For hogging off an earlier variety is recommended because the mature beans are greedily eaten by hogs and have a greater food value. It is best to pull some of the plants and feed to the hogs 2 or three days before turning in.

**31. Is this a cheap feed for hogs?** Yes, The Alabama Exp. Station showed that hogs fattened on corn alone cost 2.8 times as much as on soy beans with only a one-fourth ration of corn.

**32. Do the soy beans make good silage?** Not when used alone because they are too rich in fats, but as a supplement to corn, nothing is equal to them.

**33. How harvest for silage when sown with corn?** This is the easy part of it. When the corn is cut with the binder for filling the silo, the beans are bound in the same bundle with the butts of the cornstalks, and fed right into the silage cutter in this way. Simple, isn't it?

**34. How much will this add to the bulk of my silage?** It will add 2 to 5 tons green silage per acre.

**35. What stage of development should the soys be in for silage?** Soys may be used for silage any time after the appearance of bloom until seeds are fully developed. It is best when seeds are about two-thirds developed.

**36. Is the soy bean and corn silage better than other kinds?** Tests show that dairy cows show gains in milk production and in flesh when fed soy and corn silage and require less grain or oil meal ration at the same time, because the soy bean is so rich in protein and fats.

**37. Where can I get more information concerning soy beans?** Write your Experiment Station and the Department of Agriculture at Washington. Send for our catalogue. Ask for Questions and Answers on Sweet Clover and for Questions and Answers on Scott's Bacteria.